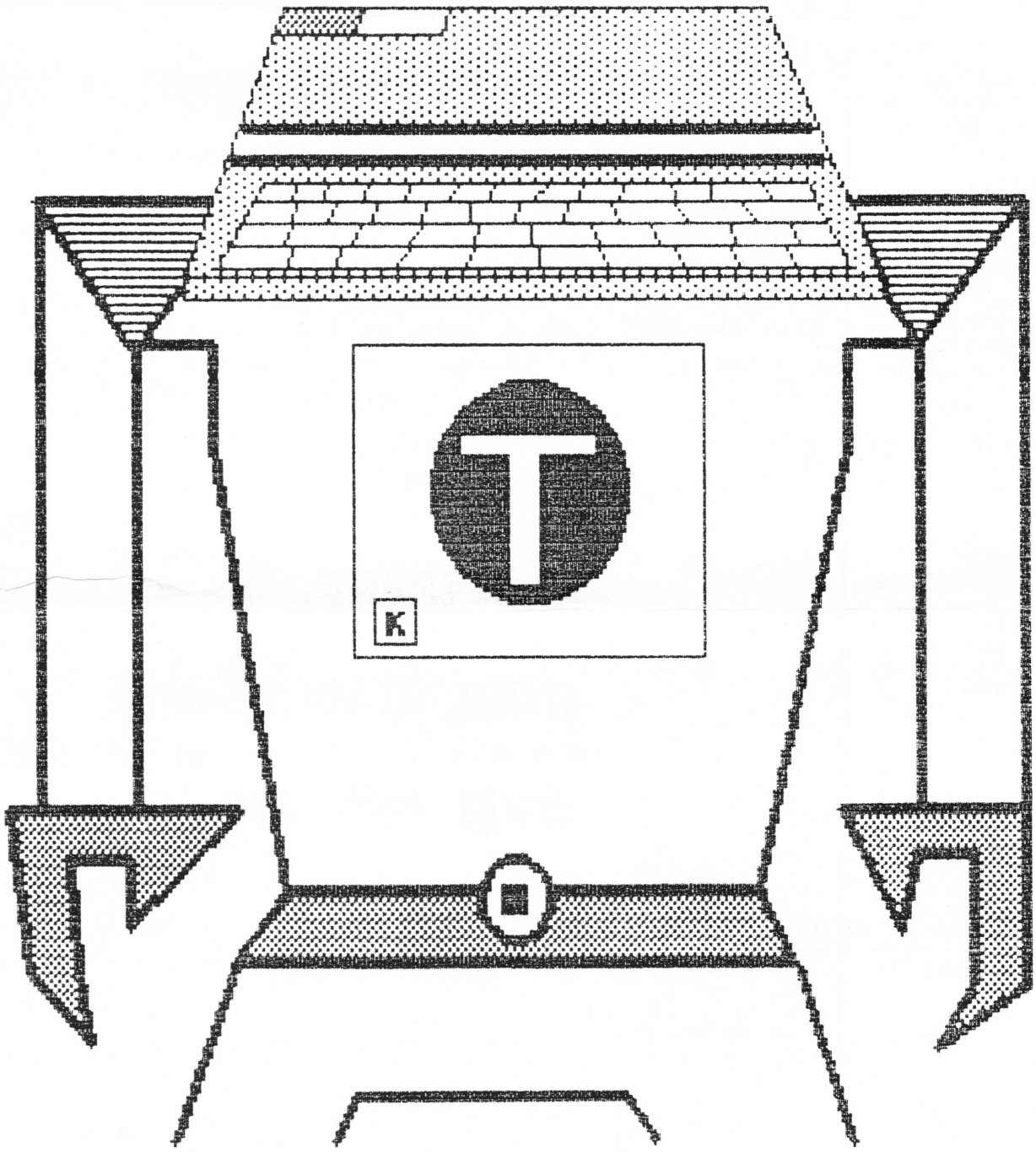
THE NEWSLETTER FOR SEATUG

SWYM

JULY/AUG
1991

VOLUME 6
NUMBER 5

T/S ROBOTICS



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SWYM

A PUBLICATION OF SEATUG

NEXT MEETING

JULY 11, 1991

7:30 P.M.

LOCATION

UNIVERSITY FEDERAL SAVINGS BANK

8517 35th Ave NE Seattle

Due to the 1st Thursday falling on Independence Day, the next meeting of SEATUG has been RESCHEDULED as noted.

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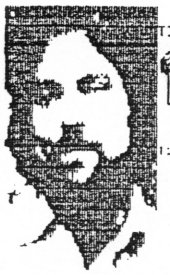
Lest we get too cocky, we at SWYM will occasionally illustrate how to make a mistake!

HAVE A FUN AND SAFE 4TH OF JULY!



Random Bits

by Chuck Forsberg

THE GOOD, THE BAD & THE BETTER

Hello, again! It's been a little while, hasn't it? There's been some new developments, here at SWYM and SEATUG, and not all of them good.

First of all, the good news: SEATUG is quite alive and well, having just added two more new members. As a matter of fact, we've just revamped our monthly meeting format in an effort to squeeze out an extra ounce of efficiency and practical obtainable information. The latest results of this revamping appear to be quite favorable. With the application of more structure in our meetings, two presentations and all official business were complete within two hours! Compare that with prior hodgepodge events stretching the meeting times from 7:30 PM to well past 11:00. Sure, we all had fun, but didn't accomplish much for the time we used. Structure, if kept in moderation, can do wonders.

The bad news, unfortunately, is that SWYM has lost an excellent editor. Robert Cazares, who, in the recent past, was responsible for the latest forward-phase of SWYM's "look", has resigned from his elected post. Reasons sited were due to time constraints from other personal developments. I think we can all sympathize with that. Producing 26 or so pages a month takes at least 1 ton of time, not to mention costs. If this were the heyday of Timex/Sinclair computers, we would have tons of advertisers who would, collectively, certainly offset the costs accrued while pushing SWYM up the next rung on the ladder. Also, if publishing this newsletter was more of a business venture instead of a volunteer club activity, more valid reasons for investing the required time could be, well, validated.

For these reasons, the publishing of SWYM will undertake a new schedule of every-other-month. Since this is the July issue, the next one you'll see will be September. Also, the ever-growing page count has been halted, to be scaled back so that one stamp will cover the mailing costs. For all you members, out there, a single page of "Minutes With SEATUG" and the next meeting announcement will be mailed in between times when SWYM isn't published.

MORE ZUNK

In case you missed the May SEATUG meeting, you missed a chance to experience the latest in 2068 software/hardware technology: Larry Zunk's CADZ-PC with a stick-mouse ("souse").

For starters, it looked as though the SEATUG Gremlin had been resurrected. Once the program was loaded into Mike DiRienzo's 265K RAM Larken system, it didn't do anything past the initial intro screen. Once we figured out that the ramdisk had to be formatted, first, things progressed quite smoothly. (By the way, Larry says that the formatting is the result of a quirk in the Larken ramdisk hardware and NOT in CADZ-PC!) A sample pc (Printed Circuit, NOT personal computer!) board pattern was installed within the special demo software. It looked great. Then we discovered that we were only viewing a corner of it, so, by way of souse (which works much faster than the keyboard), we scrolled all over this large, virtual circuit board, zooming in here, zooming out there and having a great time. When we got to a point of question, we accessed the help screens. This appears in the same format as the pc pattern: You have this humongous 'help sheet'. Your monitor is the window through which you view different sections of it by moving the "window" via the souse. Although a printer was on hand, the print functions of CADZ-PC couldn't be tested because, after all, this was only demo software and certain routines from the production version had been intentionally left out.

In case you haven't heard about it yet, CADZ-PC is a graphics/text application that will ease designing printed circuit board patterns for

you hardware hackers or add a new dimention to any newsletter editor or anyone who needs to print something eye-catching and attractive. Check out the illustration in this article. Although it has been reduced for the newsletter, you can get an idea of some of what CADZ-PC can do. These patterns are not limited to single sides. Double-sided and even layered board patterns are possible. Mike DiRienzo agreed to further check out the demo software and write a review for us. Thank you, Mike! We'll be waiting to read what you've discovered.

Also, Larry announces that the 2068 Souse is now for sale! A one-button souse is available for only $35, while a dual-button unit, which requires an internal mod to the 2068, can be had for $45. This price includes Larry doing the mod for you. The customer must be responsible for costs from shipping his computer to Mr. Zunk, however. Also announced is a fully assembled and tested 256K ramdisk for $100.

One may, at this juncture in computer evolution, wonder why anyone should bother to spend 100 bucks on a "defunct" computer to acquire a CAD. Well, consider this: You already have the computer. Since Larken is the most popular 2068 disk system, chances are you have this, also. You know, one of the reasons TS users migrate to the MS-DOS world is to gain a little speed in the computer way of doing things. One would think that adding 256K RAM to an old, 8-bit CPU would really drag the ol' workhorse to its knees. Well, let me tell you that it just isn't so! In fact there is absolutely no noticable degradation in system performance! Quite the contrary, CADZ-PC keeps up and fully utilizes its required resources without the user having to wait for the cpu to cycle thru the next step.

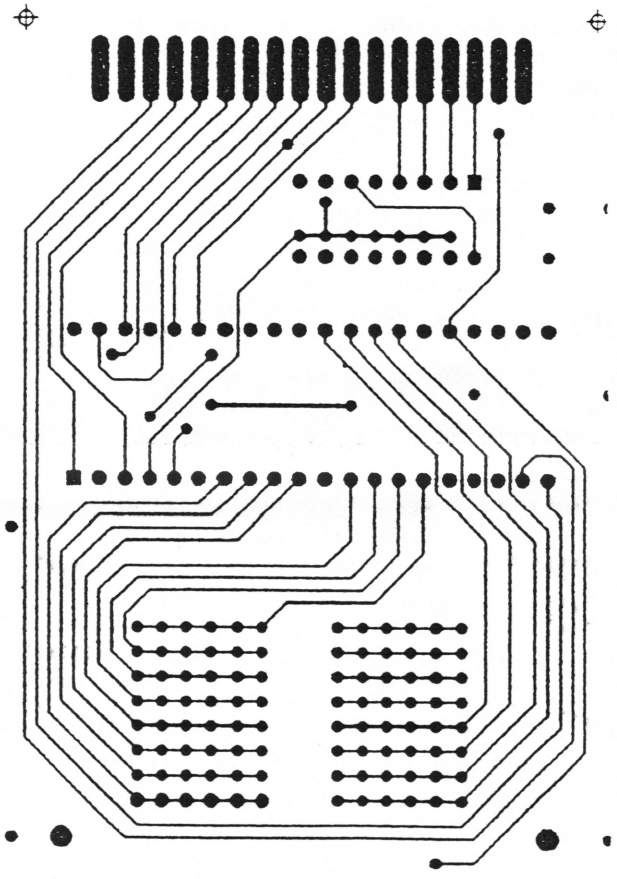
If you wish to continue using your 2068 for practical applications for a few more years, give a nod to a fellow who is keeping an eye on and keeping up with the present and the future. His mailing address is: Zunk Custom Electronics, 1419 Ferris, Waxahachie, TX 75265. Tell him SWYM sent ya.

MORE BITS

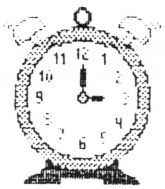
I see that the Hayes modem company was having legal troubles with Everex Systems, Omnitel and Ven-Tel because the latter three were violating Hayes' patent rights on a special modem escape sequence which allows the user to momentarily leave the online environment to do other things and then, presumably, return to the "online environment."

I just had to chuckle to myself at all the lawsuits and stuff, 'cause, shucks, folks, haven't we, as TS users, been using MTERM and the 2050 to do exactly that kind of thing for years??? Maybe we should sue them?

PHOTO-REDUCED COPY OF PRINTED-CIRCUIT PATTERN MADE WITH LARRY ZUNK'S CADZ-PC. Such patterns can be photo-transferred onto copper-clad boards for etching.



Zunk Custom Electronics
C:\AMSCAD\Z80PJ0.PCB
3-31-1991 19:31



MINUTES WITH SEATUG

by Malcolm Post, Secretary

by Chuck Kereluck
(Guest Minute-Taker)

June 6, 1991

Our regular columnist and Secretary, Malcolm Post, was absent for the June meeting, so I'm temporarily filling the void. Please bear with me.

The meeting began abruptly at 7:30 PM., presided by President Derryck Turner. There were eight members present.

A new member, Mr. Randy Rightmire of Mountlake Terrace, has been added to the official roster. Randy is currently and primarily interested in the TS1000. Let's welcome him to our ever-growing club! We'll be looking forward to seeing or hearing from you!

As per current meeting format, unanimously voted on and approved last month, an official meeting agenda was provided to each member present by President Turner. This was in the form of a very nicely-done 8-1/2 X 11 laser print. Seven phases were listed, with accompanying time frames. These different phases were almost followed to the letter (Gee...I think we missed Recess!), resulting in a very fruitful and satisfying meeting. We actually managed to conclude all business within two hours!

Treasurer Dave Battershill gave the financial report, but we're too embarrased to report it, here. Let's just say that it's time for another money-making scheme: namely, an auction!

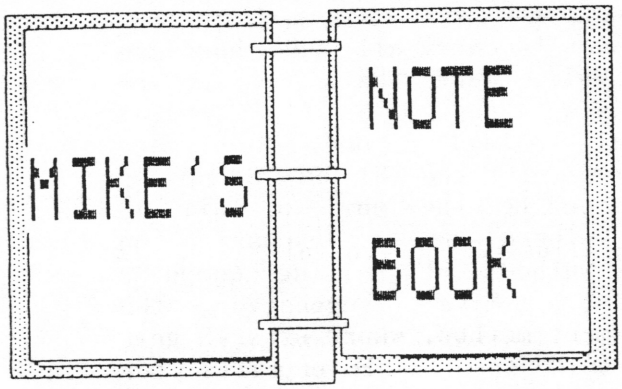
Mike DiRienzo brought the latest club contribution from ex-member, Norma Shorrock. What a collection! TS1500, 2068, 2040, 2050, 1016s, Tasman Printer interface, 2068 RGB adaptor board, tons of tape and cartridge software, books galore, cassette recorder, power supplies and cables for everything and to top it off, three (count 'em, three) locking briefcases to carry all the hardware in! Well, make that 2 locking briefcases and a special internally-molded one, made exclusively for the TS1500! Scoop up on this and be the envy of all TS Users! There was a discussion on various methods of selling computer equipment. Mike suggested the consignment-method, where used TS gear can be sold to RMG Enterprises for resale. Eventually, an auction was the chosen method, since that has worked so well in the past. This will be held at the July SEATUG meeting, so plan on attending and bring lots of cash! Derryck will write a "Thank you" letter to Norma for her generosity.

Another item of discussion concerned various members who have been asking for copies of various TS software, some to be mailed to their home. A legal question arose concerning any existing copyrights of the software authors. Ken Goods made the suggestion that since we don't yet know who is still holding to their rights, that we write RMG (the only known, remaining TS vendor) to learn who's who, or who's left.

The next phase in the meeting was the presentations. Hardware guru (one of 'em) and May's new-member-of-the-month, Robert Jorgenson gave an excellent presentation on controlling external hardware with a TS2068 or 1000. With an outboard I/O card centered on an 82C55 chip, coupled with other support circuitry, he demonstrated how merely pressing the "5" key on his 2068 activated a special relay to chatter 5 times. And this was without a monitor! Then, on this same I/O board, was a row of eight LEDs that could be made to light in various combinations via an OUT command. Also explained was another circuit (present, but not demonstrated), an ADC which had a controlling trimpot that, when turned, would sequentially light all of the LEDs! You can bet I'll be going over this I/O with a fine-toothed comb!

In-between Robert's explanations and actual demo, Pat O'Reilly gave a very enlightening talk on EPROM

cont'd pg. 7



by Michael J. Di Rienzo

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Sinclair BASIC graphics commands PLOT and DRAW have several disadvantages and shortcomings. One of them is that they only address a 256 X 176 pixel screen and cannot draw to the bottom two character lines. Another is that the PLOT command requires absolute coordinate pairs but the DRAW command needs relative offset pairs. This requires a conversion somewhere in the program. This month's utility will provide three graphics commands (PLOT, DRAW, and LINE) that will draw to the entire 256 by 192 pixel screen, and all x,y coordinate pairs required are the absolute type. The other change is that the coordinate 0,0 is at the upper-left corner of the screen. The command syntax is as follows:

```
PRINT USR plot;AT xs,ys
PRINT USR draw;AT xe,ye
PRINT USR line;AT xs,ys;xe,ye
```

All "X" values are 0 to 255, and all "Y" values are 0 to 191. The variables xs=x start, ys=y start, xe=x end, and ye=y end. As usual, DRAW requires that it be preceeded by PLOT which establishes the starting x,y coordinate. Next, Draw sets the end coordinate pair and connects them with a line. The new command, LINE, requires two coordinate pairs. The first pair sets the x,y start of the line and the second pair sets the end x,y pair and connects them with a line. Study the included example program to see how to use them. Note that the syntax of the new commands is important in terms of commas and semicolons. If you make a syntax error with the new commands, you will get a "Nonsense in Basic" error message. Note that you may use attribute commands in the usual way because each command is called using, "PRINT USR...".

After the design is drawn and the border is plotted, press any key to draw another demo. Be sure to RUN the program from line 300 to POKE in the CODE. You can use RUN after that. The CODE is not relocatable and is 249 bytes long if you want to SAVE it as a separate CODE file. A portion of the plot and draw routines were obtained from the "Advanced 2068 Machine Code", Volume 1, by Dr. Lloyd Dreger, and were enhanced a bit. I obtained this resource and others by Dr. Dreger from RMG ENTERPRISES.

Have fun!
Happy TIMEXing...

"LINES" By Michael J. Di Rienzo

```
10 RANDOMIZE : BORDER 0: PAPER 0:
   INK 1+RND*6: CLS : OUT 254,1
   : LET plot=60987: LET
   line=60990: LET draw=60994
20 LET m=(RND*20)+30
30 FOR e=10 TO 60 STEP .5
40 LET r=e*88/m
50 LET t=PI*100*e/m
60 LET xe=128+1.2*r*COS t
70 LET ye=96+r*SIN t
80 IF ye<0 OR ye>191 OR xe<0 OR
    xe>255 THEN GO TO 120
90 IF e=10 THEN GO SUB 250
100 GO SUB 240
110 NEXT e
120 FOR n=2 TO 253 STEP 2: PRINT
    USR plot;n,2: PRINT USR plot;
    n,189: PRINT USR plot;2,n AND
    n<=189: PRINT USR plot;253,n
    AND n<=189: NEXT n
130 PRINT USR line;0,0;255,0:
    PRINT USR line;255,0;255,191:
    PRINT USR line;255,191;0,191:
    PRINT USR line;0,191;0,0
140 PAUSE 0: RUN
240 PRINT USR PLOT;xs,ys: PRINT
    USR DRAW;xe,ye
250 LET xs=xe: LET ys=ye
260                          RETURN
```

swym

```
300 CLEAR 60820: LET t=0
310 FOR n=60821 TO 61069
320 READ a: POKE n,a: LET t=t+a
330 NEXT n: IF t<>29525 THEN PRINT
    FLASH 1;"Data Error! Recheck
    DATA lines": STOP
340 RUN
350 DATA 125,230,192,31,55,31,15,
    173,230,248,173,87,124,7,7,7,
    173,230,199,173,7,7,95,213,
    122,15,15,15,230,3,246,88,
    87,237,75,143,92,26,169,160,
    169,18,209,124,230,7,71,4,62,
    254,15,16,253,71,58,145,92,
    79,26,203,65,32,1,160,203,81,
    32,2,168,47,18,201
360 DATA 1,0,1,0,197,205,149,237,
    193,17,1,1,120,148,48,4,21,21,
    237,68,71,121,149,48,4,29,29,
    237,68,79,176,200,121,184,229,
    98,107,34,221,237,46,0,56,4,
    101,107,72,71,34,223,237,96,
    120,203,63,111,125,129,56,3,
    184,56,8,144,111,237,91,221,
    237,24,5,111,237,91,223,237,
    227,124,130,103,125,131,111,
    197,205,149,237,193,227,37,
    32,220,225,201
370 DATA 175,24,6,62,1,24,2,62,
    2,50,176,92,17,117,33,225,167,
    237,82,32,250,213,58,176,92,
    254,2,32,9,237,75,125,92,97,
    104,195,113,238,205,125,238,
    97,104,58,176,92,254,1,40,4,
    205,149,237,201,229,205,125,
    238,120,65,79,225,205,225,
    237,201,223,254,59,194,237,
    27,205,220,27,205,96,38,237,
    67,125,92,201
```

MINUTES cont'd...

burners. Since our club just happens to have one (minus the 1000 software and some documentation), this was a good subject to cover. The actual burner was brought for general inspection. We, as a club, are planning to learn all that is learnable about our particular one, so we can do all that is do-able.

After the presentations, a short Informal Get-Together commenced, followed by an adjournment at 9:30 P.M.

OOOPS ! !

In our April '91 issue we regrettably omitted a very important segment of Dale Fritz's fascinating article contribution: "SIERPINSKI'S GASKET." What's missing is the TS1000 BASIC program illustrating fractals!

With great apologies for the delay do we now present that omission:

```
10 REM   THE CHAOS GAME
BY TIM SWENSEN,    SINC-LINK
SEP-OCT  90,   TT-SUC TORONTO
CODED BY DALE FRITZ,   SEATUG
20 GOTO 300
90REM ...LOOP...
100 LET ROLL=INT (RND*3)+1
110 IF ROLL>1 THEN GOTO 150
120 LET X2=0
130 LET Y2=0
140 GOTO 210
150 IF ROLL>2 THEN GOTO 190
160 LET X2=63
170 LET Y2=0
180 GOTO 210
190 LET X2=31
200 LWT Y2=43
210 LET X=(X1+X2)/2
220 LET Y=(Y1+Y2)/2
230 PLOT X,Y
240 LET N=N+1
250 IF N/200=INT (N/200) THEN P
RINT AT 2,6;N
260 LET X1=X
270 LET Y1=Y
280 IF X$="S" THEN SLOW
285 IF X$="F" THEN FAST
290 GOTO 100
295 REM ...INITIALIZATION...
300 PRINT "SIERPINSKI"S";TAB 1
9;"GASKET"
310 PLOT 0,0
320 PLOT 63,0
330 PLOT 31,43
340 LET X1=RND*64
350 LET Y1=RND*44
360 PRINT AT 2,0;"ROLLS="AT 2,
26;"PRESS";AT 3,26;"S-SLOW";AT 4
,26;"F=FAST"
370 LET N=0
380 GOTO 100
9980 CLEAR
9990 SAVE "CHAOS"
```

ANNOUNCING THE SEATUG 1991 AUCTION!

JULY 11 -- 7:30 PM SEATUG MEETING HALL

HARDWARE

2068 Computer with power supply, TV adapter, TV/Monitor cable, cassette recorder cable, Keyboard tutorial tape and Users Manual

48k SPECTRUM Computer wuth power supply, Interface 1, RGB interface with cable, Disc Drive interface with snapshot, 3" Amdek Disc Drive, Microdrive, ZXL Printer cable and Users Manuals for SPECTRUM, Microdrive, Interface 1 and Amdek

1500 Computer with power supply, TV adapter, Cassette recorder cable, Users Manual and carrying case

Westridge 2050 MODEM with power supply, Users manual, software manual, MTERM Telecommunications manual and two programs: MTERM and Communications program

GE "Computer Program" Tape Recorder

2040 Printer with power supply and 1 roll paper

Three 16k RAMS for the 1000/1500

2068 Centronics printer interface with cable

2068 RGB interface with cable

Archer AC Adapter with selected 3, 4 1/2, 6, 7 1/2, 9v DC 300 ma output

Radio Shack AC Adapter with 1.4v DC 60ma output

Two 11"x17"x3" Attache Cases with keys

SOFTWARE

2068 PROFILE with 143 page manual

TASWORD TWO word proceessor with 21 page manual, TASMAN driver, Tasman interface, TASWORD for MT 80

OMNICALC spreadsheet with 31 page manual

Sign Designer and Graphic Library files

1000 ZX PROFILE, Casino 1, Meteorites, Mixed Game Bag, Power Pack 1

BOOKS

2068 Technical Manual, Beginner/Intermed & Intermed/Advanced Guides, 50 Programs for 2068

1000 Users Manual
12 books on 1000 games, BASIC and hardware projects

BE THERE!!